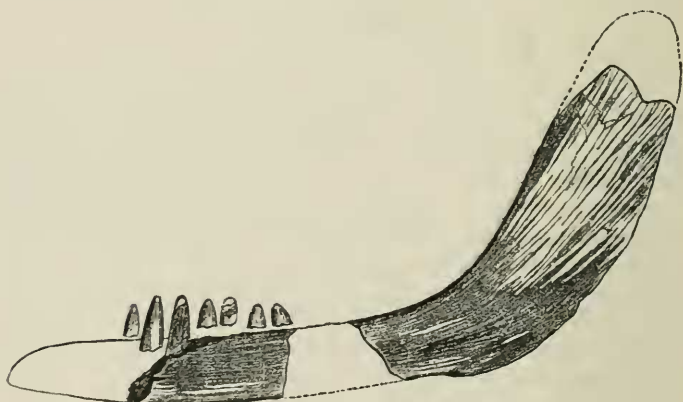


XL.—On a new *Theriodont Reptile* (*Ictidosuchus primævus*)  
 from the Karoo Beds, South Africa. By R. BROOM, M.D.,  
 B.Sc.

IN the lower beds of the Karoo formation near Pearston I have been fortunate in recently discovering the remains of a small *Theriodont* reptile of a remarkably generalized type. The remains were met with in the beds of indurated shale, and though, unfortunately, much of the skeleton has been weathered away and irretrievably lost, sufficient has been left in the rock to give a very good idea of the type. The parts discovered consist of a moderately complete lower jaw, a considerable portion of the maxilla with teeth, and a number of other portions of the skull; the almost perfect scapula, coracoid, and precoracoid; the humerus and radius; a femur and a tibia and fibula; two or three imperfect vertebræ and ribs; and a number of other fragmentary remains. Unfortunately the various bones are mingled together in almost inextricable confusion—the tibia and fibula lying across the scapula and the femur right across the humerus—so that it is a matter of great difficulty to develop the one bone without injuring the other. As the form is of much interest, and the thorough examination of the remains will necessarily take considerable time, I have thought it advisable to give a short preliminary account of the animal.



Lower jaw of *Ictidosuchus primævus*, nat. size.

The lower jaw resembles much more the *Theriodont* jaws from the Upper Karoo beds than any of those hitherto found

in the Lower. In its general form and proportions the resemblance to the jaw of *Tribolodon* from Lady Frere (Phil. Trans. 1894, B, pl. lxxxviii. fig. 6) is very marked. The horizontal ramus of the jaw is long and rather slender and moderately uniform in depth. The coronoid process is very well developed, long and fairly thick, and makes an angle of about  $120^{\circ}$  with the ramus. Almost the whole lower jaw appears to be formed by the dentary, the splenial being a feeble splint and the articular, which is lost, probably not large.

Perhaps the most remarkable feature of the form is the simple structure of the teeth. Seven teeth still remain in the jaw, and though it is possible that one or two others are lost, those that remain show that there is no marked distinction between incisors, canines, and molars, all the teeth being modifications of the simple pointed Saurian type. All the teeth are feebly ribbed, and the anterior teeth differ from the posterior only in being longer and moderately sharp, while the latter have rounded apices.

The fragment of the maxilla shows the upper teeth to be very similar to those of the lower jaw.

The scapular arch resembles that of *Rhopalodon* (Phil. Trans. 1894, B, p. 703) more closely than that of *Dicynodon*. The scapula, while expanded and flat above, is narrow in the middle. There is no very distinct acromion. Inferiorly the scapula is much expanded and forms a large articulation with the precoracoid. The precoracoid is considerably larger than the coracoid and differs from that in *Dicynodon* in not entering into the glenoid cavity and in completely surrounding the precoracoid foramen. The coracoid closely resembles that in *Dicynodon*.

The humerus is very mammal-like and bears considerable resemblance to that of *Gomphognathus* (Phil. Trans. 1895, B, p. 29), though less robust. There is a large epicondylar foramen, and the whole lower half of the bone so far as is preserved is much like that of the Phalangers. Above, there is a sharp delto-pectoral crest, somewhat less prominent than that in *Gomphognathus*, because less directed outwards from the bone.

The femur is slightly longer than the humerus, and, like it, shows much resemblance to the mammalian types. There is a well-marked great trochanter, which forms a prominent trochanteric ridge more resembling the condition in some of the Edentates and Marsupials than that of either of the Monotremes. On the whole, however, the affinities of the bone are mainly with the type seen in *Echidna*; and if the

femur of this Monotreme were a rounded instead of a flattened bone, the general resemblances between it and that of the fossil form would be very marked. The lower end of the femur especially is flattened and quite Monotreme-like.

The tibia and fibula are both long simple bones, considerably longer than the radius. The fibula is only about half the thickness of the tibia.

As soon as a thorough examination has been made of the more fragmentary remains, and the more perfect elements more thoroughly cleared of matrix, an endeavour will be made to describe in detail, with figures, the various remains of this primitive type, for which I propose the name *Ictidosuchus primævus*, gen. et sp. n.

The following are some of the principal measurements of the bones:—

	millim.
Lower jaw: symphysis to coronoid process .....	94+
Depth of jaw at largest tooth (canine?) .....	10
Height of largest tooth .....	5
Antero-posterior diameter of largest tooth .....	2.3
Length of scapula .....	73+
Width of upper part of scapula .....	19
Width in narrow middle region .....	9
Width at base .....	23
Length of humerus (72 millim.+) .....	probably 82
Width of humerus near middle .....	9
Length of femur (86 millim.+) .....	probably 90
Width of femur near middle .....	8
Length of tibia .....	94
Width of tibia at lower third .....	9×5

Pearston, S. Africa.

XLI.—*Some new Arachnida from Cape Colony.*

By R. I. POCOCK.

Order SOLIFUGÆ.

Genus SOLPUGA, Licht.

*Solpuga Schönlandi*, sp. n.

♂.—*Colour* a uniform pale yellow, as in *S. venator*; width of head less than tibia of palp and than patella or tibia of fourth leg. Form of mandible recalling that of *S. Darlingii*, but with upper jaw armed with only one minor tooth in front of and remote from the two large distal teeth; the